

बिड दस्तावेज़ / Bid Document

बिड विवरण / Bid Details	
बिड बंद होने की तारीख/समय / Bid End Date/Time	04-11-2026 17:00:00
बिड खुलने की तारीख/समय / Bid Opening Date/Time	05-11-2026 17:00:00
बिड पेशकश वैधता (बंद होने की तारीख से) / Bid Offer Validity (From End Date)	90 (Days)
मंत्रालय/राज्य का नाम / Ministry/State Name	Ministry Of Education
विभाग का नाम / Department Name	Department Of Higher Education
संगठन का नाम / Organisation Name	National Institute Of Technical Teachers Training And Research (nitttrs)
कार्यालय का नाम / Office Name	Bhopal
शिकायत निवारण के संपर्क विवरण / Contact details of Grievance redressal	HOD Email id : hod.nitttr.bhopal@gembuyer.in Buyer Email id: sagrawal.trbl@nic.in
कुल मात्रा / Total Quantity	595
वस्तु श्रेणी / Item Category	Fiber Cable Armoured SM in mtr 12 Core , Network Rack 9U , Network Rack 6U , Gigabit Switch 8 Port PoE , Gigabit Switch 24 Port Non PoE , Indoor Access Point , Fiber Optical Module SFP 1G SM LR , Fiber Patch Cord 3 Mtr LC-LC , Cat6 Cable Bundle 305Mtrs , Patch Panel 24 Port , Patch Cord 1Mtr Cat6 , Patch Cord 2 Mtr Cat6 , LIU LC Fiber Patch Panel 24 Port , Cable Manager , Cat6 IO single Face plate with Back box , Installation of all above items
GeMARPTS में खोजी गई स्ट्रिंग्स / Searched Strings used in GeMARPTS	Fiber Cable Armoured SM in mtr, 12 Core, Network Rack 9U, Network Rack 6U, Gigabit Switch (8 Port) PoE, Gigabit Switch (24 Port) Non- PoE, Indoor Access Point, Fiber Optical Module SFP 1G SM LR, Fiber Patch Cord 3 Mtr LC-LC, Cat6 Cable Bundle 305Mtrs, Patch Panel (24 Port), Patch Cord 1Mtr Cat6, Patch Cord 2 Mtr Cat6, LIU LC Fiber Patch Panel 24 Port, Cable Manager, Cat6 I/O single Face plate with Back box, Compelte Installation charges
	Searched String: Fiber Cable Armoured SM in mtr, 12 Core Ruggedised and Armoured Fibre Optic Patch Cord Searched String: Network Rack 9U Server or Network Rack (V2), Metal Shelving Racks (Adjustable Type) conforming To Is 1883 (V2), Bathroom Rack, Squats Rack (Version 2), Wooden Shelf / Case / Rack / Credenza / Modular Storage (V2), Laboratory Reagent rack, Servers (V2), Smart Rack (V2), Desk and Bench Set for Classroom/Training Area, Test Tube Rack

बिड विवरण / Bid Details	Searched String: Network Rack 6U
GeMARPTS में खोजा गया परिणाम / Searched Result generated in GeMARPTS	Server or Network Rack (V2), Metal Shelving Racks (Adjustable Type) conforming To Is 1883 (V2), Bathroom Rack, Squats Rack (Version 2), Wooden Shelf / Case / Rack / Credenza / Modular Storage (V2), Laboratory Reagent rack, water baths, Smart Rack (V2), Servers (V2), Test Tube Rack Searched String: Gigabit Switch (8 Port) PoE Unmanaged L2 Ethernet Switch (Non-PoE), Unmanaged L2 Ethernet Switch (PoE), Industrial Ethernet Switch (V2), Fibre Channel SAN Switch - Fixed Port, KVM Switches (V2), Add on Gateways for PABX System, Director-Class Storage Area Network (SAN) Switch, HDMI Switcher, Fabricated PVC - U Fittings for Portable Water Supplies as per IS 10124 Searched String: Gigabit Switch (24 Port) Non- PoE Unmanaged L2 Ethernet Switch (Non-PoE), Industrial Ethernet Switch (V2), Director-Class Storage Area Network (SAN) Switch Searched String: Indoor Access Point Wireless LAN Access Point (V3), Enterprise Remote Access and Support Software, Outdoor / Indoor Fountain, Access Control System, Point of Care Rapid Test Kits for Humans - Dengue, Malaria, Typhoid & Others, Air Quality Monitor (Indoor), Kiosk Displays, Network Access Control Software, modular electrical enclosure switch board boxes for modular type accessories, Access Door Assembly (BHEL) Searched String: Fiber Optical Module SFP 1G SM LR Optical Fibre Cable for Networking, Fiber Optic Pigtails, Fibre Media Converters (V2), Ribbon Optical Fiber Splicing Machine as per TEC Specification, Fiber optic tool kit, Passive optical network power meter Searched String: Fiber Patch Cord 3 Mtr LC-LC Ruggedised and Armoured Fibre Optic Patch Cord, Fiber Optic Patch Cord (V2), Fiber Optic Pigtails, Copper Patch Cord, Locking Compression Plates (V2) Searched String: Cat6 Cable Bundle 305Mtrs Ethernet Cables, XLPE Cable for Working Voltage up to and Including 1.1 KV Marked To IS 7098 (Part 1), PVC Insulated Copper Cable Single Core and Multi Core Circular Sheathed with Flexible Conductor (V2) ISI Marked To IS 694, PVC Insulated Copper Cable Single Core and Multi Core Circular Sheathed with Rigid Conductor (V2) ISI Marked To IS 694, XLPE Cable, Working Voltage from 3.3 kV up to and including 33 kV (V2) ISI Marked to IS 7098 (Part 2), PVC Insulated Unsheathed Cable with Flexible Conductor ISI Marked To IS 694, Flat Cable, Copper Conductor with PVC Insulation and Sheathed ISI Marked To IS 694, PVC Single Core and Multi Core Circular Sheathed Aluminium Cable with Rigid Conductor (V2) as per IS 694, PVC Insulated (Heavy Duty) Electric Cables Marked To IS 1554 (Part 1) (V2), PVC Insulated Unsheathed Cable with Rigid Conductor (V2) ISI Marked To IS 694 Searched String: Patch Panel (24 Port)

बिड विवरण / Bid Details	Fibre Patch Panel, Copper (Ethernet) Patch Panel, USB Type External Hard Disk Drive (V3), Add on Gateways for PABX System
	Searched String: Patch Cord 1Mtr Cat6 Copper Patch Cord, Fiber Optic Patch Cord (V2), Ruggedised and Armoured Fibre Optic Patch Cord, PVC Insulated Copper Cord Single Core and Multi Core Circular Sheathed with Flexible Conductor (V2) ISI Marked To IS 694, Ethernet Cables, Digital Trainer Kit, Nasal Cannula (V2), Desk and Chair Set for Classroom/Training Area, Desk and Bench Set for Classroom/Training Area, Endotracheal Tube - Sterile (Single Use) Searched String: Patch Cord 2 Mtr Cat6 Copper Patch Cord, Fiber Optic Patch Cord (V2), Ruggedised and Armoured Fibre Optic Patch Cord, PVC Insulated Copper Cord Single Core and Multi Core Circular Sheathed with Flexible Conductor (V2) ISI Marked To IS 694, Ethernet Cables, Desk and Bench Set for Classroom/Training Area, Elastomer Insulated, Unkinkable Flexible Cords (Workshop Type) Marked To IS 9968 (Part 1), Unplsticized PVC Pipes for Water Supply conforming to IS 4985, Desk and Chair Set for Classroom/Training Area, Line Interactive UPS with AVR (V2) Searched String: LIU LC Fiber Patch Panel 24 Port Fibre Patch Panel, Ruggedised and Armoured Fibre Optic Patch Cord Searched String: Cable Manager Queue manager, XLPE Cable for Working Voltage up to and Including 1.1 KV Marked To IS 7098 (Part 1), Field Telephone Cable (Telecommunication Cable), ostomy appliance adhesive, Antenna Cable, PVC Insulated Unsheathed Cable with Flexible Conductor ISI Marked To IS 694, Control Cable, Speaker cable, PVC Insulated Copper Cable Single Core and Multi Core Circular Sheathed with Rigid Conductor (V2) ISI Marked To IS 694, Cable Tie (V2) Searched String: Cat6 I/O single Face plate with Back box Corrugated Boxes, modular electrical enclosure switch board boxes for modular type accessories Searched String: Compelte Installation charges MPLS Connectivity (Port Charges), AR/VR Application Development Including Hardware Installation, Design Installation and Maintenance of Educational Lab/Centre, Repair, Maintenance and Installation of Plant/ Systems/Equipments, Plantation Service, Office Productivity Suite, Repair, Maintenance, and Installation of Plant/ Systems/Equipments (Version 2), Design, Supply, Installation, Commissioning and Maintenance of Grid Connected Roof Top Solar Power Plant Service, Hiring of Vehicle Tracking Services, Electric Cabling Service
अधिसूचना के लिए चयनित प्रासंगिक श्रेणियाँ / Relevant Categories selected for notification	• Layer 3 Managed Network Switches (Core/Distribution Grade) • Wireless LAN Access Point (V3) • Optical Fibre Cable for Networking

बिड विवरण/Bid Details	
बीओक्यू शीर्षक /BOQ Title	Networking and WiFi items with controller support
बिडर का न्यूनतम औसत वार्षिक टर्नओवर (3 वित्तीय वर्षों का) /Minimum Average Annual Turnover of the bidder (For 3 Financial Years)	3 Lakh (s)
उन्हीं/समान सेवा के लिए अपेक्षित विगत अनुभव के वर्ष/Years of Past Experience Required for same/similar service	3 Year (s)
टर्नओवर पात्रता मानदंड/Turnover eligibility criteria	GeM verified turnover
वर्षों के अनुभव एवं टर्नओवर से एमएसई को छूट प्राप्त है / MSE Relaxation for Years Of Experience and Turnover	Yes Complete
स्टार्टअप के लिए अनुभव के वर्षों और टर्नओवर से छूट प्रदान की गई है / Startup Relaxation for Years Of Experience and Turnover	Yes Complete
विक्रेता से मांगे गए दस्तावेज़/Document required from seller	Experience Criteria,Past Performance,Bidder Turnover,Certificate (Requested in ATC),OEM Authorization Certificate,Additional Doc 1 (Requested in ATC),Compliance of BoQ specification and supporting document *In case any bidder is seeking exemption from Experience / Turnover Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer
क्या आप निविदाकारों द्वारा अपलोड किए गए दस्तावेजों को निविदा में भाग लेने वाले सभी निविदाकारों को दिखाना चाहते हैं? संदर्भ में नू है/Do you want to show documents uploaded by bidders to all bidders participated in bid?	Yes (Documents submitted as part of a clarification or representation during the tender/bid process will also be displayed to other participated bidders after log in)
बिड लगाने की समय सीमा स्वतः नहीं बढ़ाने के लिए आवश्यक बिड की संख्या। / Minimum number of bids required to disable automatic bid extension	3
दिनों की संख्या, जिनके लिए बिड लगाने की समय-सीमा बढ़ाई जाएगी। / Number of days for which Bid would be auto-extended	3
ऑटो एक्सटेंशन अधिकतम कितनी बार किया जाना है। / Number of Auto Extension count	1
विगत प्रदर्शन /Past Performance	50 %
बिड से रिवर्स नीलामी सक्रिय किया/Bid to RA enabled	Yes
रिवर्स नीलामी योग्यता नियम/RA Qualification Rule	H1-Highest Priced Bid Elimination
बिड का प्रकार/Type of Bid	Two Packet Bid
प्राथमिक उत्पाद श्रेणी/Primary product category	Gigabit Switch 24 Port Non PoE

बिड विवरण/Bid Details	
तकनीकी मूल्यांकन के दौरान तकनीकी स्पष्टीकरण हेतु अनुमत समय /Time allowed for Technical Clarifications during technical evaluation	2 Days
निरीक्षण आवश्यक (सूचीबद्ध निरीक्षण प्राधिकरण /जेम के साथ पूर्व पंजीकृत एजेंसियों द्वारा)/Inspection Required (By Empanelled Inspection Authority / Agencies pre-registered with GeM)	No
अनुमानित बिड मूल्य / Estimated Bid Value	740000
मूल्यांकन पद्धति/Evaluation Method	Total value wise evaluation
मध्यस्थता खंड/Arbitration Clause	No
सुलह खंड/Mediation Clause	No

ईएमडी विवरण/EMD Detail

एडवाइजरी बैंक/Advisory Bank	State Bank of India
ईएमडी राशि/EMD Amount	22200

ईपीबीजी विवरण /ePBG Detail

एडवाइजरी बैंक/Advisory Bank	State Bank of India
ईपीबीजी प्रतिशत (%) /ePBG Percentage(%)	5.00
ईपीबीजी की आवश्यक अवधि (माह) /Duration of ePBG required (Months).	38

(a). जेम की शर्तों के अनुसार ईएमडी छूट के इच्छुक बिडर को संबंधित केटेगरी के लिए बिड के साथ वैध समर्थित दस्तावेज़ प्रस्तुत करने हैं। एमएसई केटेगरी के अंतर्गत केवल वस्तुओं के लिए विनिर्माता तथा सेवाओं के लिए सेवा प्रदाता ईएमडी से छूट के पात्र हैं। व्यापारियों को इस नीति के दायरे से बाहर रखा गया है।/EMD EXEMPTION: The bidder seeking EMD exemption, must submit the valid supporting document for the relevant category as per GeM GTC with the bid. Under MSE category, only manufacturers for goods and Service Providers for Services are eligible for exemption from EMD. Traders are excluded from the purview of this Policy.

(b).ईएमडी और संपादन जमानत राशि, जहां यह लागू होती है, लाभार्थी के पक्ष में होनी चाहिए। / EMD & Performance security should be in favour of Beneficiary, wherever it is applicable.

(c).ईएमडी और संपादन जमानत राशि लाभार्थी के पक्ष में होनी चाहिए। / Earnest Money Deposit (EMD) shall also be accepted by the buyer in the form of a surety bond.

लाभार्थी /Beneficiary :

Director
National Institute of Technical Teachers Training and Research (NITTTRs), Shyamla Hills, Bhopal
(Director Nitttr Bhopal)

बोली विभाजन लागू नहीं किया गया/ Bid splitting not applied.

एमआईआई खरीद वरीयता / MII Purchase Preference

एमआईआई खरीद वरीयता / MII Purchase Preference	Yes
मेक इन इंडिया विक्रेताओं को खरीद में प्राथमिकता, यदि उनका मूल्य $L1+X\%$ तक की सीमा में है / Purchase Preference to MII sellers available upto price within $L1+X\%$	20
मेक इन इंडिया खरीद में प्राथमिकता के लिए बिड की मात्रा का अधिकतम प्रतिशत / Maximum Percentage of Bid quantity for MII purchase preference	50
सार्वजनिक खरीद (मेक-इन-इंडिया को प्राथमिकता) आदेश 2017 के अनुसार केवल क्लास 1/क्लास 2 के स्थानीय आपूर्तिकर्ताओं को ही भागीदारी की अनुमति है दिनांक 16.09.2020 (समय-समय पर संशोधित एवं लागू) / Allow participation only from Class 1/Class 2 local suppliers as per the Public procurement(Preference to Make-in-india) order 2017 date 16.09.2020(as amended and applicable time to time)	Yes, in compliance with the MII ORDER : DPIIT Order(as amended and applicable time to time)

एमएसई खरीद वरीयता/MSE Purchase Preference

एमएसई खरीद वरीयता/MSE Purchase Preference	Yes
सूक्ष्म और लघु उद्यम मूल उपकरण निर्माताओं/सेवा प्रदाता को खरीद में प्राथमिकता, यदि उनका मूल्य $L1+X\%$ / Purchase Preference to MSE OEMs/ Service Provider available upto price within $L1+X\%$	15
सूक्ष्म और लघु उद्यम मूल उपकरण निर्माता/सेवा प्रदाता को खरीद में प्राथमिकता के लिए बिड की मात्रा का अधिकतम प्रतिशत / Percentage of Bid quantity/amount for MSE OEMs/ Service Provider Purchase preference	25

1. If the bidder is a Micro or Small Enterprise as per latest orders issued by Ministry of MSME, the bidder shall be relaxed from the eligibility criteria of "Experience Criteria" as defined above subject to meeting of quality and technical specifications. The bidder seeking Relaxation from Experience Criteria, shall upload the supporting documents to prove his eligibility for Relaxation.
2. If the bidder is a Micro or Small Enterprise (MSE) as per latest orders issued by Ministry of MSME, the bidder shall be relaxed from the eligibility criteria of "Bidder Turnover" as defined above subject to meeting of quality and technical specifications. If the bidder itself is MSE OEM of the offered products, it would be relaxed from the "OEM Average Turnover" criteria also subject to meeting of quality and technical specifications. The bidder seeking Relaxation from Turnover, shall upload the supporting documents to prove his eligibility for Relaxation.
3. If the bidder is a DPIIT registered Startup, the bidder shall be relaxed from the the eligibility criteria of "Experience Criteria" as defined above subject to their meeting of quality and technical specifications. The bidder seeking Relaxation from Experience Criteria, shall upload the supporting documents to prove his eligibility for Relaxation.
4. If the bidder is a DPIIT registered Startup, the bidder shall be relaxed from the the eligibility criteria of "Bidder Turnover" as defined above subject to their meeting of quality and technical specifications. If the bidder is DPIIT Registered OEM of the offered products, it would be relaxed from the "OEM Average Turnover" criteria also subject to meeting of quality and technical specifications. The bidder seeking Relaxation from Turnover shall upload the supporting documents to prove his eligibility for Relaxation.

5. The minimum average annual financial turnover of the bidder during the last three financial years, ending on 31st March of the previous financial year, should be as indicated in the bid document. The turnover of the bidder shall be validated by the system based on the financial data available on the GeM portal. The average turnover shall be calculated based on the last three financial years where data is available; in case data is available for only two of the last three financial years, the average shall be computed based on those two years. In case the date of constitution / incorporation of the bidder is less than three years old, the average turnover in respect of the completed financial years after the date of constitution / incorporation shall be taken into account for this criterion. No separate documentary evidence is required to be uploaded by the bidder for this criterion, as the system shall derive and validate the turnover figures from the data available on the GeM portal.

6. Experience Criteria: In respect of the filter applied for experience criteria, the Bidder or its OEM of the product offered in the bid {themselves or through reseller(s)} should have regularly, manufactured and supplied same or similar Category Products to any Central / State Govt Organization / PSU for number of Financial years as indicated above in the bid document before the bid opening date. Copies of relevant contracts and delivery acceptance certificates like CRAC to be submitted along with bid in support of having supplied some quantity during each of the Financial year. In case of bunch bids, the category of primary product having highest value should meet this criterion.

7. Preference to Make In India products (For bids < 200 Crore): Preference shall be given to Class 1 local supplier as defined in public procurement (Preference to Make in India), Order 2017 as amended from time to time and its subsequent Orders/Notifications issued by concerned Nodal Ministry for specific Goods/Products. The minimum local content to qualify as a Class 1 local supplier is denoted in the bid document. If the bidder wants to avail the Purchase preference, the bidder must upload a certificate from the OEM regarding the percentage of the local content and the details of locations at which the local value addition is made along with their bid, failing which no purchase preference shall be granted. In case the bid value is more than Rs 10 Crore, the declaration relating to percentage of local content shall be certified by the statutory auditor or cost auditor, if the OEM is a company and by a practicing cost accountant or a chartered accountant for OEMs other than companies as per the Public Procurement (preference to Make-in -India) order 2017 dated 04.06.2020. Only Class-I and Class-II Local suppliers as per MII order dated 4.6.2020 will be eligible to bid. Non - Local suppliers as per MII order dated 04.06.2020 are not eligible to participate. However, eligible micro and small enterprises will be allowed to participate .The buyers are advised to refer the OM No.F.1/4/2021-PPD dated 18.05.2023.

[OM No.1 4 2021 PPD dated 18.05.2023](#) for compliance of Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017 and its subsequent Orders/Notifications issued by concerned Ministry .Benefits of MSE will be allowed only if seller/service provider is validated on-line in GeM profile as well as validated and approved by Buyer after evaluation of documents submitted.

8. Purchase preference to Micro and Small Enterprises (MSEs): Purchase preference will be given to MSEs having valid Udyam Certificate and whose credentials are validated online through Udyam Registration portal as defined in Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 dated 23.03.2012 issued by Ministry of Micro, Small and Medium Enterprises and its subsequent Orders/Notifications issued by concerned Ministry. If the bidder wants to avail themselves of the Purchase preference, the bidder must be the manufacturer / OEM of the offered product on GeM. In respect of bid for Services, the bidder must be the Service provider of the offered Service. Traders are excluded from the purview of Public Procurement Policy for Micro and Small Enterprises and hence resellers offering products manufactured by some other OEM are not eligible for any purchase preference. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered product or service, and Buyer will decide eligibility for purchase preference based on documentary evidence submitted in case of product bids, whereas in case of services the eligibility is automatically validated. If L-1 is not an MSE and MSE Seller (s) has / have quoted price within L-1+ 15% (Selected by Buyer) of margin of purchase preference /price band defined in relevant policy, such MSE Seller shall be given opportunity to match L-1 price and contract will be awarded for 25% (selected by Buyer) percentage of total quantity. The buyers are advised to refer the [OM No.1 4 2021 PPD dated 18.05.2023](#) for compliance of Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017. Benefits of MSE will be allowed only if seller is validated on-line in GeM profile as well as validated and approved by Buyer after evaluation of documents submitted.

9. Estimated Bid Value indicated above is being declared solely for the purpose of guidance on EMD amount and for determining the Eligibility Criteria related to Turn Over, Past Performance and Project / Past Experience etc. This has no relevance or bearing on the price to be quoted by the bidders and is also not going to have any impact on bid participation. Also this is not going to be used as a criteria in determining reasonableness of quoted prices which would be determined by the buyer based on its own assessment of reasonableness and based on competitive prices received in Bid / RA process.

10. Past Performance: The Bidder or its OEM {themselves or through re-seller(s)} should have supplied same or similar Category Products for 50% of bid quantity, in at least one of the last three Financial years before the bid opening date to any Central / State Govt Organization / PSU. Copies of relevant contracts (proving supply of cumulative order quantity in any one financial year) to be submitted along with bid in support of quantity supplied in the relevant Financial year. In case of bunch bids, the category related to primary product having

highest bid value should meet this criterion.

11. Reverse Auction would be conducted amongst all the technically qualified bidders except the Highest quoting bidder. The technically qualified Highest Quoting bidder will not be allowed to participate in RA. However, H-1 will also be allowed to participate in RA in following cases:

- i. If number of technically qualified bidders are only 2 or 3.
- ii. If Buyer has chosen to split the bid amongst N sellers, and H1 bid is coming within N.
- iii. In case Primary product of only one OEM is left in contention for participation in RA on elimination of H-1.
- iv. If L-1 is non-MSE and H-1 is eligible MSE and H-1 price is coming within price band of 15% of Non-MSE L-1
- v. If L-1 is non-MII and H-1 is eligible MII and H-1 price is coming within price band of 20% of Non-MII L-1

Fiber Cable Armoured SM In Mtr 12 Core

(क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक/Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively)

तकनीकी विशिष्टियाँ /Technical Specifications

Specification Document	View File
BOQ Detail Document	View File

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

प्रेषिती/रिपोर्टिंग अधिकारी तथा मात्रा/Consignees/Reporting Officer and Quantity

क्र.सं./S.No.	प्रेषिती/रिपोर्टिंग अधिकारी /Consignee Reporting/Officer	पता/Address	मात्रा /Quantity	डिलीवरी के दिन/Delivery Days
1	Sanjay Agrawal	462002,N.I.T.T.R., Shanti Marg, Shamlu Hills Bhopal	500	21

Network Rack 9U

(क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक/Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively)

तकनीकी विशिष्टियाँ /Technical Specifications

Specification Document	View File
BOQ Detail Document	View File

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

परिषिती/रिपोर्टिंग अधिकारी तथा मात्रा/Consignees/Reporting Officer and Quantity

क्र.सं./S.No.	परिषिती/रिपोर्टिंग अधिकारी /Consignee Reporting/Officer	पता/Address	मात्रा /Quantity	डिलीवरी के दिन/Delivery Days
1	Sanjay Agrawal	462002,N.I.T.T.T.R., Shanti Marg, Shamla Hills Bhopal	1	21

Network Rack 6U

(क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक/Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively)

तकनीकी विशिष्टियाँ /Technical Specifications

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BOQ Detail Document	View File

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1	Sanjay Agrawal	462002,N.I.T.T.T.R., Shanti Marg, Shamla Hills Bhopal	1	21

Gigabit Switch 8 Port PoE

(क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक/Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively)

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1	Sanjay Agrawal	462002,N.I.T.T.T.R., Shanti Marg, Shamla Hills Bhopal	1	21

Gigabit Switch 24 Port Non PoE

(क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक/Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively)

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1	Sanjay Agrawal	462002,N.I.T.T.T.R., Shanti Marg, Shamla Hills Bhopal	1	21

Indoor Access Point

(क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक/Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively)

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1	Sanjay Agrawal	462002,N.I.T.T.T.R., Shanti Marg, Shamla Hills Bhopal	4	21

Fiber Optical Module SFP 1G SM LR

(क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक/Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively)

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1	Sanjay Agrawal	462002,N.I.T.T.T.R., Shanti Marg, Shamla Hills Bhopal	4	21

Fiber Patch Cord 3 Mtr LC-LC

(क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक/Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively)

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1	Sanjay Agrawal	462002,N.I.T.T.T.R., Shanti Marg, Shamla Hills Bhopal	4	21

Cat6 Cable Bundle 305Mtrs

(क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक/Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively)

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क्र.सं./S.N o.	परिषिती/रिपोर्टिंग अधिकारी /Consignee Reporting/Officer	पता/Address	मात्रा /Quantity	डिलीवरी के दिन/Delivery Days
1	Sanjay Agrawal	462002,N.I.T.T.T.R., Shanti Marg, Shamla Hills Bhopal	2	21

Patch Panel 24 Port

(क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक/Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively)

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क्र.सं./S.N o.	परिषदी/रिपोर्टिंग अधिकारी /Consignee Reporting/Officer	पता/Address	मात्रा /Quantity	डिलीवरी के दिन/Delivery Days
1	Sanjay Agrawal	462002,N.I.T.T.T.R., Shanti Marg, Shamla Hills Bhopal	3	21

Patch Cord 1Mtr Cat6

(क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक/Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively)

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1	Sanjay Agrawal	462002,N.I.T.T.T.R., Shanti Marg, Shamla Hills Bhopal	26	21

Patch Cord 2 Mtr Cat6

(क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक/Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively)

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1	Sanjay Agrawal	462002,N.I.T.T.T.R., Shanti Marg, Shamla Hills Bhopal	20	21

LIU LC Fiber Patch Panel 24 Port

(क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक/Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively)

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1	Sanjay Agrawal	462002,N.I.T.T.T.R., Shanti Marg, Shamla Hills Bhopal	4	21

Cable Manager

(क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक/Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively)

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1	Sanjay Agrawal	462002,N.I.T.T.T.R., Shanti Marg, Shamla Hills Bhopal	3	21

Cat6 IO Single Face Plate With Back Box

(क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक/Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively)

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1	Sanjay Agrawal	462002,N.I.T.T.T.R., Shanti Marg, Shamla Hills Bhopal	20	21

Installation Of All Above Items

(क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक/Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively)

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क्रेता द्वारा जोड़ी गई बिड की विशेष शर्तें/Buyer Added Bid Specific Terms and Conditions**1. Generic**

OPTION CLAUSE: The Purchaser reserves the right to increase or decrease the quantity to be ordered up to 25 percent of bid quantity at the time of placement of contract. The purchaser also reserves the right to increase the ordered quantity up to 25% of the contracted quantity during the currency of the contract at the contracted rates. The delivery period of quantity shall commence from the last date of original delivery order and in cases where option clause is exercised during the extended delivery period the additional time shall commence from the last date of extended delivery period. The additional delivery time shall be $(\text{Increased quantity} \div \text{Original quantity}) \times \text{Original delivery period (in days)}$, subject to minimum of 30 days. If the original delivery period is less than 30 days, the additional time equals the original delivery period. The Purchaser may extend this calculated delivery duration up to the original delivery period while exercising the option clause. Bidders must comply with these terms.

2. Generic

Bidder financial standing: The bidder should not be under liquidation, court receivership or similar proceedings, should not be bankrupt. Bidder to upload undertaking to this effect with bid.

3. Generic

Data Sheet of the product(s) offered in the bid, are to be uploaded along with the bid documents. Buyers can match and verify the Data Sheet with the product specifications offered. In case of any unexplained mismatch of technical parameters, the bid is liable for rejection.

4. Generic

Malicious Code Certificate:

The seller should upload following certificate in the bid:-

(a) This is to certify that the Hardware and the Software being offered, as part of the contract, does not contain Embedded Malicious code that would activate procedures to :-

- (i) Inhibit the desires and designed function of the equipment.
- (ii) Cause physical damage to the user or equipment during the exploitation.
- (iii) Tap information resident or transient in the equipment/network.

(b) The firm will be considered to be in breach of the procurement contract, in case physical damage, loss of information or infringements related to copyright and Intellectual Property Right (IPRs) are caused due to activation of any such malicious code in embedded software.

5. Buyer Added Bid Specific ATC

Buyer Added text based ATC clauses

Item S. No. 1 :- Fiber Cable Armoured SM in mtr, 12 Core

Characteristic	Minimum Required Specification		Compliance (Yes/No)
GENERAL:	12F Unitube Armored with water blocking tape. Rodent Proof, UV Protection. Direct Burial. Embedded Strength members as 2 steel wires od 1.0 mm. Polyester based yarns below Armor tape for easy ripping Thermoplastic Material Tube Excellent Water Proof Layer and Moisture Resistance Excellent Crush Resistance Performance Light Weight and Compact Structure ~~The fiber type is a Matched Cladding Single Mode~~ Low water peak fiber G.652D		
	Extremely high bandwidth. Optimized to support t ransmission at 1310 nm,1550 nm. Virtually unlimited Modal Bandwidth at 1310 nm		
	Should fulfill the requirements of: IEC 60793-1/60794-1.2 ITU-T REC G.652D Telecordia GR-20 Core		
	Testing methods are in accordance with the follo wing standards: ITU-T G.652.D IEC 793-1		
GEOMETRICAL PROPERTIES	Nominal mode field dia meter	9.2 μm	
	Mode field diameter tol erance	$\pm 4 \mu\text{m}$	
	Cladding diameter	125	
	Cladding diameter toler ance	$\pm 1 \mu\text{m}$	
	Mode field concentricity error	$< 1 \mu\text{m}$	
	Cladding non-circularity	(= $<$) 1.0	
ENVIRONMENT AL CHARACTER	Change of Temperature Attenuatio n increase, -60°C to+85° C	$\leq 0.05 \text{ db/km}$	
	Dry Heat Atte nuation increase, 30 da ys at 85°C	$\leq 0.05 \text{ db/km}$	

ISTICS	Damp Heat Attenuation increase, 30 days at 85° C/ 85%R.H.		<= 0.05 db/km	
	Damp Heat Attenuation increase, 30 days at 85° C/ 85%R.H.		<= 0.05 db/km	
MATERIALS	CORE		Germanium doped core with no phosphorus i.e. reduced tendency for hydrogen degradation.	
	COATING		UV-curable dual layer acrylate coating, which ensures excellent micro bending and abrasion resistance.	
	Coating Strip Force (typical)			
	Min.		1.3 N	
	Max.		8.9 N	
	Stripping force after ageing in water at 70 ± 5 °C for 168 h.			
	Min.		1.0 N	
	Max.		3.5 N	
	Attenuation (of cable with fibers):			
	At 1310 nm		<= 0.35 dB/km	
Atten. At 1383nm (OH-Peak)		<= 0.35dB/km		
At 1550 nm		<= 0.25 dB/km		
Cut-off wavelength λ_c :				
High limit		1330 nm		
Low limit		1180 nm		
Cut-off wavelength λ_{cc}				
High limit		1260 nm		
Loss increase at 1550 nm for 100 turns of fiber loosely wound with a 37.5 mm radius:				
Max.		0.1 dB		
Dispersion:				

OPTICAL PROPERTIES	Zero dispersion wavelength	1310 nm	
	Tolerance of zero dispersion		
	Wavelength	-10/+12 nm	
	Zero-dispersion slope: $1295 \leq \lambda_0 \leq 1300$		
	Max.	≤ 0.092 at λ_0	
	Chromatic dispersion coefficient:		
	In 1285 nm - 1330 nm interval:		
	Max.	3.5ps/km • nm	
	In 1270 nm - 1340 nm interval		
	Max.	6 ps/km • nm	
	At 1550 nm		
	Max.	18 ps/km • nm	
	Polarisation Mode Dispersion (PMD):		
	Max.	≤ 0.2 ps/km	
	In homogeneity of OTDR trace for any two 1000 meter fiber lengths		
	Max.	0.1 dB/km	
	Proof test level	1%	

Item S. No. 2 :- Network Rack 9U			
S I. N o .	Parameter	Specification	Compliance
			Yes/No
1	Size	600W x 600D	
2	Form factor	9U	
3	Construction	Clear 'U' usable space, fan or extra cables should not occupy usable space	
4	Basic Frame	A riveted metal framework consisting of 2 end plates (top and bottom) and 2 fix side panels	
5	Assembly	Assembled	

6	Top & Bottom Cover	Top and bottom cover with pre-cut cable entries (upper and lower - 300x50mm centered in width) which can be knocked with a mallet. Cable entries can be equipped with the brush supplied with the cabinet. 2 Fans provision at the top	
7	Front Door	The door is made of a flat colourless transparent glass of 4mm thick with screen-printing of charcoal grey RAL 7016 on the vertical edges and is fitted with locking bolt. The door is removable and reversible	
8	Rear side	Wall Mounting brackets	
9	19" Mounting Angle	Four 19" uprights are perforated with 9.5 x 9.5mm square holes	
10	Std. Equipment Mounting	19" uprights with dual marking of the Us and can be adjusted in depth by 25mm steps. The 19" uprights are perforated with 9.5 x 9.5mm square holes	
11	Standard Finish	Epoxy polyester paint applied by electrostatic dusting with 60-80 micron thickness	
12	Colour	All components- RAL 7035 in Pastel fine texture/ All components- RAL 9005 in Black structure	
13	Accessories	Horizontal power distribution unit, Metal Cable manager, Hardware packet and Cantilever Shelf	
14	Equipment cooling	2 Fan Mount provision on top cover	
15	Rack Standards	IEC 60529 EN 60529, IEC 62262 EN 62262, DIN 41494, EIA 310, IEC 60297	
16	Degree of Protection	IP20 according to IEC EN 60529, IK08 according to IEC EN 62262	
17	Warranty	Three years	

Item S. No. 3 :- 6 U Network Rack

Technical Specifications

	Compliance (Yes/No)
Rack Size	
Wall Mount 6U	

Features:	
Wall Mount Steel Enclosure type suitable for Networking, Telecom, Audio Video and Lab applications.	
Minimum 6U height with 550mm width and 600mm depth enclosure.	
Fabricated from CRCA steel with welded frame construction and powder coated finish.	
Conforms to DIN 41494 or equivalent ISO standards.	
Adjustable 19" equipment mounting verticals for better mounting flexibility and maximum usable space.	
Depth adjustable mounting slots for flexible equipment installation.	
Top and bottom panels with ventilation and cable entry/exit facility.	
Provision for mounting cooling fan units on the top panel.	
Lockable toughened glass front door with lock & key arrangement.	
Minimum 2 pairs of 19" mounting rails with U-Marking support.	
Equipment mounting based on DIN standard mounting slots.	
19" mounting angles made of formed steel for equipment installation.	
Grounding and bonding options with compatibility for DIN 41494 standard equipment.	
Welded vented top & bottom cover with field cable entry/exit cut-outs.	
Supplied with Cable Manager, Power Distribution Unit (PDU), Fan Module and required hardware accessories.	
Roof mounted fan unit with minimum 90 CFM airflow and 230V AC support.	
Minimum static load capacity of 25 KG or higher.	

Item S. No. 4 :- Gigabit Switch (8 Port) PoE		
S. No.	Technical Specification	Compliance (Yes/No)
1	Switch should have Non-Blocking Architecture minimum 8 x 1G RJ45 PoE Ports.	
2	Switch should have 2 x 10G SFP+ Slots for Uplink/Stacking.	
3	Switch should have 1 x RJ45 Console Port and 1 x Out Of Band Management Port.	
4	Switch should have 1 x USB Type A port to connect external storage for backup/ restore/ firmware management.	

5	Total PoE budget should be 120 watts with 802.3af and 802.3at PoE standards.	
6	Switch should support Stacking up to 8 Switches.	
7	Switch should have Non-Blocking switch capacity of 56 Gbps or more and wire-speed forwarding rate of 42 Mpps or more.	
8	Switch should support 4k Active VLANs.	
9	Switch should support 16k MAC addresses or more.	
10	Switch should support up to 9K bytes Jumbo Frames.	
11	Switch should have QoS protocol including DiffServ, Priority Queue, Strict priority, Traffic shaping and policing, WRR, SP+WRR, Traffic flow with ACL support, srTCM, trTCM, and 802.1p support.	
12	Switch should have security features including RADIUS, TACACS+, Port security, AAA, Role-based access control, 802.1x authentication, CoA, ACL, IP source guard, DoS prevention, ARP inspection, Secure Copy (SCP), Kerberos, and SSL.	
13	Switch should support IGMP v1/v2/v3, IGMP snooping, MLD v1/V2, MLD snooping, PIM-SM, PIM-SSM, PIM-SMv6, Multicast TV VLAN, and MVR.	
14	Switch should have Layer 2 Protocols including BPDU guard, GVRP, Auto MDI/MDIX, Link aggregation, LLDP, Loopback detection, LACP, Port isolation, Port mirroring, Root guard, Auto voice VLAN, Guest VLAN, Flow control, STP/RSTP/MSTP, and QinQ (802.1Q).	
15	Switch should have Layer 3 Protocols including IPv4 and IPv6 dual stack, ISATAP, IP source guard, PBR, DHCP (server, Client, relay), IPv6 NDRA, Duplicate Address Detection (DAD), IPv6 SLAAC, IPv6 ND, ARP-Proxy.	
16	Switch should have Layer 3 Routing Protocols including Static routing (IPv4, IPv6), Inter-VLAN routing, RIPv2, and OSPFv2/v3.	
17	Switch should support Stacking, Ring Redundancy Protocol (RRP), and VRRP.	
18	Switch should have Management Protocols including Local GUI, Controller/Standalone, CLI, Telnet, TFTP, HTTP, SSHv1/v2, SNMP v1/v2c/v3, SNT, and Netflow/sFlow.	
19	Switch should have monitoring and troubleshooting with DD, UDLD, Traceroute, Ping, ICMPv4/v6, Virtual cable test etc.	
20	Switch should support manageability using a controller/NMS from the same OEM. Perpetual license or License for 10 years to be quoted along with it.	

21	Switch should have CE, FCC, IEC 60950, BIS, TEC, IPv6 logo ready and RoHS certificates.	
22	OEM should have ISO-9001:2015, ISO-14001:2015, ISO-20000-1:2018, ISO-27001:2013, ISO-45001:2018, ISO/IEC 15408 and CMMi Level 3 certificates.	
23	OEM should fall under Make in India Class-1 category.	
24	OEM of proposed equipment should have IPR (Intellectual property rights) in India only. A statutory auditor's certificate to be submitted at the time of bidding.	

Item S. No. 5 :- Gigabit Switch 24 Port non PoE

S. No.	Technical Specifications	Compliance (Yes/No)
1	Switch should have Non-Blocking Architecture 24 x 1G RJ45 Ports.	
2	Switch should have 4 x 10G SFP+ Slots for Uplink/Stacking.	
3	Switch should have 1 x RJ45 Console Port and 1 x Out of Band Management Port.	
4	Switch should have 1 x USB Type A port to connect external storage for backup/ restore/ firmware management.	
5	Switch should support Stacking up to 8 Switches.	
6	Switch should have non-blocking switch capacity of minimum 128 Gbps or more and wire-speed forwarding rate of minimum 95 Mpps or more.	
7	Switch should have Inbuild AC power supply.	
8	Switch should support 4k Active VLANs.	
9	Switch should support 16k MAC addresses or more.	
10	Switch should support up to 9K bytes Jumbo Frames.	
11	Switch should have QoS protocol including DiffServ, Priority Queue, SP, Traffic shaping and policing, WRR, SP+WRR, Traffic flow with ACL support, srTCM, trTCM, and 802.1p support.	
12	Switch should have security features including RADIUS, TACACS+, Port security, AAA, Role-based access control, 802.1x authentication, CoA, ACL, IP source guard, DoS prevention, ARP inspection, Secure Copy (SCP), Kerberos, and SSL.	
13	Switch should support IGMP v1/v2/v3, IGMP snooping, MLD v1/V2, MLD snooping, PIM-SM, PIM-SSM, PIM-SMv6, Multicast TV VLAN, and MVR.	
14	Switch should have Layer 2 Protocols including BPDU guard, GVRP, Auto MDI/MDIX, Link aggregation, LLDP, Loopback detection, LACP, Port isolation, Port mirroring, Root guard, Auto voice VLAN, Guest VLAN, Flow control, STP/RSTP/MSTP, and QinQ (802.1Q).	

15	Switch should have Layer 3 Protocols including IPv4 and IPv6 dual stack, ISATAP, IP source guard, PBR, DHCP (server, Client, relay), IPv6 NDRA, Duplicate Address Detection (DAD), IPv6 SLAAC, IPv6 ND, ARP-Proxy.	
16	Switch should have Layer 3 Routing Protocols including Static routing (IPv4, IPv6), Inter-VLAN routing, RIPv2, and OSPFv2/v3.	
17	Switch should support Stacking, Ring Redundancy Protocol (RRP), and VRRP.	
18	Switch should have Management Protocols including Local GUI, Controller/Standalone, CLI, Telnet, TFTP, HTTP, SSHv1/v2, SNMP v1/v2c/v3, SNTp, and NetFlow/sFlow.	
19	Switch should support manageability using a controller/NMS from the same OEM. Perpetual license or License for 10 years to be quoted along with it.	
20	Switch should have monitoring and troubleshooting with DDM, UDD, Traceroute, Ping, ICMPv4/v6, Virtual cable test etc.	
21	Switch should have • Operating temperature: -5°C to 65°C • Storage temperature: -40°C to 70°C	
22	The offered switch shall be TEC-ER certified and IPv6 Ready Logo certified.	
23	The OEM shall possess valid certifications including ISO 9001:2015, ISO 27001:2013, CMMI Level 3 certification issued by the CMMI institute.	
24	The OEM shall qualify under the Make in India Class-I category (minimum 60% local content) and supporting documentary evidence shall be submitted at the time of bidding.	
25	The offered product shall have a valid Vulnerability Assessment and Penetration Testing (VAPT) certification/report conducted by a CERT-In empanelled agency. Relevant documentary proof shall be submitted along with the technical bid.	

Item S. No. 6 :- Indoor Access Point		
Sl. No.	Specification	Compliance Yes/No
1	AP should support 802.11b/g/n/ac/ax and 2x2 MU-MIMO on both the radios.	
2	AP should support data rate of 1200 Mbps on 5 GHz and 573 Mbps on 2.4 GHz.	

3	AP should have at least 24 dBm on 5 GHz and 27 dBm on 2.4 GHz aggregated transmit power.	
4	AP should have antenna gain of 5 dBi on both the radios.	
5	AP should support BLE with antenna gain of 4 dBi or more.	
6	AP should have integrated internal antenna only.	
7	AP should have client capacity up to 512 clients per access point	
8	AP should support up to 32 SSID (16 On Each Band).	
9	AP should support Encryption including WPA/WPA2/WPA3/WPA3-2-Mixed.	
10	AP should support 802.1x Authentication Method with MAC authentication for wireless client authentication purpose.	
11	AP should be configurable to work as stand-alone as well as cloud managed without any hardware or firmware changes. And controller should be provided from the same OEM.	
12	It should come with quick configuration mode and can be monitored, configured and managed by Web GUI or Mobile App.	
13	For bulk deployment, the AP should support static IP and VLAN assignment from controller at the time of provisioning before deployment.	
14	Support for DHCP Option 43 and 60 for auto controller discovery.	
15	Should be configurable as bridge mode or router mode without any hardware or firmware changes at time of first time setup or after deployment.	
16	Should support wireless client airtime fairness from day one.	
17	Support for disabling the reset/reboot button on the AP via controller.	
18	Support of fast roaming using IEEE 802.11r, assisted roaming via 802.11k/v, Management Frame Protection via 802.11w, WMM and 802.11d.	
19	Should support both auto and Manual channel Management with DFS Enablement.	
20	Should support both auto and Manual TX Power Management.	
21	Should support RTS (Request To Send) and CTS(Clear To Send) thresholds to avoid frame collisions and hence avoid packet drops resulting in improved network performance.	

22	AP should have 1 x 2.5G WAN PoE port, 1 x 1G LAN port, 1 x Console and 1 x USB 3.0 port for IoT and Internet dongle. Should have fail over functionality between LAN and USB ports.	
23	AP should have powering option of PoE+ and DC both.	
24	AP should be mountable in Wall, Ceiling, and on Metal Ceiling Tiles without any Additional Cost or Component	
25	AP should have diagnostics tools like Ping, Traceroute and Nslookup.	
26	AP should have WPC (ETA), TEC, BIS, CE, IEC 60950 and RoHS certificates.	
27	OEM should have ISO-9001:2015, ISO-14001:2015, ISO-20000-1:2018, ISO-27001:2013, ISO-45001:2018, ISO/IEC 15408 and CMMi Level 3 certificates.	
28	OEM should fall under Make in India Class-1 category.	
29	OEM of proposed equipment should have IPR (Intellectual property rights) in India only. A statutory auditor's certificate to be submitted at the time of bidding.	

Item S. No. 7 :- Fiber Optical Module SFP 1G SM LR		
Sl. No.	Specification	Compliance Yes/No
1	1G single-mode SFP module. Form factor: SFP	
2	Support data rate: 1G	
3	Wavelength: 1310 nm	
4	Support protocol IEEE 802.3z	
5	Fiber type: Single mode	
6	Should support 10 km optical distance	
7	Should have LC Duplex optical interface	
8	Hot-swappable input/output gadget	
9	Should be RoHS compliant	

Item S. No. 8 :- Fiber Patch Cord 3 Mtr LC-LC

Sr. No	Technical specification	Compliance (Yes/No)
Features	LSZH Jacket-Reduced Toxic Gasses Emitted During Combustion.	
	Simplex and Duplex Options	
	100% Factory Tested	
	Low Insertion Loss and Return Loss	
	Available with Corning Fiber	
	Available in PC/APC Type Options	
	High Precision Ceramic Ferrule with Good Concentricity	
	Connector Type : SC, ST, FC, LC Fiber Type : OS2	

Item S. No. 9 :- Cat6 Cable Bundle 305Mtrs.		
S. No.	Technical specification	Compliance (Yes/No)
1	The 4 pair Unshielded Twisted Pair cable shall be UL Listed.	
2	This cable well exceeds the requirements of TIA/EIA-568-C.2 and ISO/IEC 11801	
3	Nominal Outer Diameter of Cable should be 5.9+/-0.01mm and Conductor Diameter 0.56 mm (23 AWG)	
4	Construction: 4 twisted pairs separated by internal PE Cross Separator. Full separator. Half shall not be accepted. Rip Cord is must.	
5	Conductor Solid bare Copper and Outer jacket sheath FRPVC and UL approved CM rated cable. Jacket color: Light Grey	
6	Insulation: High Density Polyethylene Solid	
7	Printed sequential Length Counter of each meter on Outer Jacket	
8	Category 6 UTP cables shall Supports Gigabit Ethernet (1000 base-T) standard and operates at bandwidth of 250MHz	

Item S. No. 10 :- Patch Panel (24 Port)		
Sr. No.	Technical specification	Compliance (Yes/No)
1	24 Port loaded patch panel. The Cat-6 transmission performance is in compliance and Exceeds ANSI/TIA/EIA-568-C.2 Standard. Supports 1000-Base-T.	

2	90 Degree (Top Entry) Punch Down Design for Convenient Network Terminations.	
3	Ease of Installation with built in Rear Cable Management.	
4	Removable Module Design	
5	6x4 Module Specially Designed Jack Configuration	
6	PCB: FR4, 1.6mm Thickness 2 Layers	
7	Jack Wire: Square wire Phosphor Bronze with 30μ" Gold Over Nickel Plating.	
8	1U Patch Panel to Mount In any Standard Rack. Panel Frame: SPCC Powder Coating in Matt Finish.	

Item S. No. 11 :- Patch Cord 1Mtr Cat6		
Sr. No.	Technical specification	Compliance (Yes/No)
1	1 M patch cords cat6 UTP LSZH. Category 6 UTP Patch Cords should be Factory Tested for Better	
	Quality and Suitable for the High-Speed Data Transmission.	
2	Complies with the ANSI/TIA/EIA-568-C.2 Standard. Supports Data Networks Speeds Up to 10/100-Base-T and 1000-Base-T	
3	Should be LSZH Jacket for Reduced Toxic Gasses Emitted During Combustion	
4	RJ45, 8P8C, 2 FORK 50μ" Gold Plated Contacts	
5	Patch cords should be 100% Factory Tested	
6	Conductor Material: Stranded Copper	
7	Conductor Diameter: (24 AWG)	
8	Insulation Material: HDPE	

Item S. No. 12 :- Patch Cord 2mtr Cat6	
Technical Specifications	Compliance (Yes/No)

General features	
Category 6 Unshielded Twisted Pair (UTP) cable suitable for structured copper cabling, Gigabit Ethernet (1000BASE-T), digital voice, data and video applications.	
Compliance with ANSI/TIA-568-C.2 Category 6, ISO/IEC 11801 Class E or equivalent standards; RoHS compliant.	
Construction: 4 twisted pairs (8 conductors) using solid bare copper conductors, minimum 23 AWG.	
Individual conductor insulation: High-density polyethylene or equivalent, with suitable internal separator/cross separator for maintaining pair geometry and transmission performance.	
Outer jacket: FR-PVC or equivalent flame-retardant material suitable for indoor structured cabling installations.	
Nominal outer cable diameter: Approximately 6.1 mm; characteristic impedance: 100 ± 15 Ohms.	
Maximum conductor DC resistance: ≤ 9.38 Ohms/100 m; mutual capacitance: < 5.6 nF/100 m; capacitance unbalance: ≤ 330 pF/100 m.	
Maximum delay skew: ≤ 45 ns; nominal velocity of propagation: approximately 69%.	
At 250 MHz, maximum attenuation: ≤ 35.9 dB/100 m.	
At 250 MHz, minimum NEXT: 33.1 dB, PSNEXT: 30.2 dB, ACRF: 15.3 dB and PSACRF: 12.3 dB.	
At 250 MHz, minimum Return Loss: 8 dB or better.	
Minimum pulling force: 11.5 kg; operating temperature range: -20°C to $+70^{\circ}\text{C}$; storage temperature range: 0°C to $+50^{\circ}\text{C}$.	
Supply in continuous reels of 305 metres nominal length with suitable packaging; sequential length marking/printing at regular intervals for installation and cable management.	
Individually colour-coded pairs suitable for standard T568A/T568B termination and structured cabling administration.	
Compatibility with standard Category 6 patch panels, keystone jacks, faceplates and RJ45 connectivity components.	
UL Listed, ETL verified or certified by equivalent internationally recognized testing/certification agencies.	
Suitable for professional structured cabling installations with performance characteristics supporting reliable high-speed data transmission.	

Item S. No. 13 :- LIU LC Fiber Patch Panel 24 Port		
Sr. No	Technical specification	Compliance (Yes/No)

Characteristic	Min. 6 Port Configuration Available in Standard 19"
	6/12/24 Ports Adapter Interface available without any adapter plates.
	Consist of Top Cover and Bottom Panel
	Easy to Assemble and Disassemble
	Three Types of Inlet Holes
	Cable Entry Through Water Proof Cable Glands
	Splice Max 24 Fibers per Splice Tray
	Patch Cord with Bend Radius Guides Minimize Macro Bending
	Install 6 Cable Management Rings Inside to Ensure Flexibility
	Comprehensive Accessory Kits for Cable Entry and Fiber Management
	Dimensions (mm) : 430 X 220 X 1U
	Body Material : S PCC Black Powder Coating

Item S. No. 15 :- Cable Manager		
Sl. No.	Specification	Compliance Yes/No
1	19" 1U Metal cable management	
2	SPCC cold rolled steel	
3	Mounts on 19" racks or cabinets	
4	Horizontal cable management	

Item S. No. 15 :- Cat6 I/O, Single Face Plate with Back Box	
Technical Specification	Compliance (Yes/No)
General features	
Category 6 keystone jacks are RJ45, 8 position 8 contact socket.	
Category 6 keystone jacks are suitable for 22-26 AWG stranded and solid wire.	

Category 6 keystone jacks are compatible with both 110 & Krone punch down tools.	
The Category 6 keystone jacks shall be backward compatible with Category 5e, 5 and 3 cords and cables.	
It compliance with ANSI/TIA/EIA 568 C.2 standard.	
The Category 6 keystone jacks shall be of a universal design supporting T568 A & B wiring.	
Color of Keystone Jack: White	
Category 6 keystone jacks housing made from PC, UL 94V-2 material.	
RJ45 Jack contact material should be phosphor bronze with nickel plated. Finished with 50 micro-inch gold plated on plug contact area.	
IDC Housing made from PC, UL 94V-2. Terminal material should be Phosphor bronze with tin plated.	
Should have IDC CAP and material of IDC Cap should be PC, UL 94V-2.	
Current rating should be 1.5A.	
Operating Temperature should be -10° Celsius to 60° Celsius.	
Life of Jack should be 750 cycles minimum (ISO/IEC 11801 / IEC 60603-7-4).	

Terms & Conditions: -

1) The Wireless Indoor Access Point and Switches should be compatible with existing NITTTTR centralized wireless controller and existing NITTTTR infrastructure. Supplying high-quality devices to ensure excellent service without any decline in performance of users and access points.

2) Should have a Cloud controller license valid for a minimum of 10 years (for quoted Switches and Access Point Qty)

3) All network devices should have a minimum warranty of 3 years and on-site support.

4) Should have Tender specific Manufacturer Authorization Form (MAF) required for all the active components (Switches and access points).

6. Buyer Added Bid Specific ATC

Buyer uploaded ATC document [Click here to view the file.](#)

7. Forms of EMD and PBG

Bidders can also submit the EMD with Account Payee Demand Draft in favour of

Director NITTTTR Bhopal

payable at
Bhopal

. Bidder has to upload scanned copy / proof of the DD along with bid and has to ensure delivery of hardcopy to the Buyer within 5 days of Bid End date / Bid Opening date.

8. Forms of EMD and PBG

Successful Bidder can submit the Performance Security in the form of Account Payee Demand Draft also (besides PBG which is allowed as per GeM GTC). DD should be made in favour of

Director NITTTR Bhopal
payable at
Bhopal

. After award of contract, Successful Bidder can upload scanned copy of the DD in place of PBG and has to ensure delivery of hard copy to the original DD to the Buyer within 15 days of award of contract.

अस्वीकरण/Disclaimer

The Additional Terms and Conditions (ATC) have been incorporated by the Buyer after approval of their Competent Authority. The Buyer, is solely responsible for the impact of these clauses on the bidding process, its outcome, and consequences thereof including any restriction arising in the bidding process due to these ATCs and including the modification of technical specifications and / or terms and conditions governing the bid. All representations / grievances pertaining to the ATC clauses shall be raised with the buyer organization directly and not with GeM. If any of the clause(s) is/are incorporated by the Buyer regarding the following, the bid & resultant contract shall be treated as null & void. Further, GeM reserves the right, at its sole discretion, to cancel the bid forthwith, without issuance of any prior notice or intimation :-

1. Publishing Custom / BOQ bids for items for which regular GeM categories are available (unless such Custom / BOQ item is bunched with the major regular product Category Item).
2. Mandating procurement of / from specific Brand / Make / Model / Manufacturer / Dealer except in case of Single Bid / Proprietary Article Certificate (PAC) Buying.
3. Inclusion of disqualification criteria related to suspension of seller / service provider, where such suspension period has already expired.
4. Mandating submission of documents (other than EMD and signed Integrity Pact - which can be submitted within 5 days of bid opening) in physical form as a pre-requisite to qualify bidders.
5. Publishing bids on GeM for procurement of works.
6. Procurement of Goods by creating a Service bid on GeM & vice-versa.
7. Seeking sample with bid or approval of samples during bid evaluation process. However, trial / sample, as the case may be, shall be permitted in cases where trial / sample are allowed as per approved and published procurement policy of the Buyers' controlling Ministry / Department / State / Public Sector Enterprises Headquarters. If there is any violation of trial / sample clause with regard to approved policy of the Buyers' Ministry / Department / State / Public Sector Enterprises Headquarters, then this is to be determined and redressed by the concerned Buyer Organisation only.
8. Seeking experience from specific organization / department / institute only or from foreign / export experience.
9. Creating bid for items from incorrect categories.
10. Reference of conditions published on any external site or reference to external documents/clauses.
11. Asking for any Tender fee / Bid Participation fee, as the case may be.
12. Buyer added ATC Clauses which are in contravention of clauses defined in bid detail section, including specifications, EMD Detail, ePBG Detail and MII and MSE Purchase Preference sections of the bid, unless otherwise allowed by the applicable GeM GTC.
13. Any ATC clause in contravention with GeM GTC Clause 4 (xiii) (h) will be invalid. In case of multiple L1 bidders against a service bid, the buyer shall place the Contract by selection of a bidder amongst the L-1 bidders through a Random Algorithm executed by GeM system.
14. In a category based bid, adding additional items, through buyer added, additional scope of work/ additional terms and conditions/or any other document. If buyer needs more items along with the main item, the same must be added through bunching category based items or by bunching custom catalogues or bunching a BoQ with the main category based item, the same must not be done through ATC or Scope

of Work.

Further, if any seller has any objection/grievance against these additional clauses or otherwise on any aspect of this bid, they can raise their representation against the same by using the Representation window provided in the bid details field in Seller dashboard after logging in as a seller. Buyer is duty bound to reply to all such representations and would not be allowed to open bids if he fails to reply to such representations.

All GeM Sellers/Service Providers shall ensure full compliance with all applicable labour laws, including the provisions, rules, schemes and guidelines under the four Labour Codes i.e. the Code on Wages, 2019; the Industrial Relations Code, 2020; the Occupational Safety, Health and Working Conditions Code, 2020; and the Code on Social Security, 2020 as and when notified and brought into force by the Government of India.

For all provisions of the Labour Codes that are pending operationalisation through rules, schemes or notifications, the corresponding provisions of the pre-existing labour enactments (such as The Minimum Wages Act, 1948, The Payment of Wages Act, 1936, The Payment of Bonus Act, 1965, The Equal Remuneration Act, 1976, The Payment of Gratuity Act, 1972, etc. and relevant State Rules) shall continue to remain applicable.

The Seller/ Service Providers shall, therefore, be responsible for ensuring compliance under:

- All notified and enforceable provisions of the new Labour Codes as mentioned hereinabove; and
- All operative provisions of the erstwhile Labour Laws until their complete substitution.

All obligations relating to wages, social security, safety, working conditions, industrial relations etc. and any other statutory requirements shall be strictly met by the Seller/ Service Provider. Any non-compliance shall constitute a breach of the contract and shall entitle the Buyer to take appropriate action in accordance with the contract and applicable law.

This Bid is governed by the General Terms and Conditions, conditions stipulated in Bid and Service Level Agreement specific to the Service, as the case may be, as provided in the Marketplace.

However, in case of Service, if any condition specified in General Terms and Conditions is contradicted by the conditions stipulated in Service Level Agreement specific to said Service, then it will over-ride the conditions in the General Terms and Conditions.

[यह बिड सामान्य शर्तों के अंतर्गत भी शासित है /This Bid is also governed by the General Terms and Conditions](#)

जेम की सामान्य शर्तों के खंड 26 के संदर्भ में भारत के साथ भूमि सीमा साझा करने वाले देश के बिडर से खरीद पर प्रतिबंध के संबंध में भारत के साथ भूमि सीमा साझा करने वाले देश का कोई भी बिडर इस निविदा में बिड देने के लिए तभी पात्र होगा जब वह बिड देने वाला सक्षम प्राधिकारी के पास पंजीकृत हो। बिड में भाग लेते समय बिडर को इसका अनुपालन करना होगा और कोई भी गलत घोषणा किए जाने व इसका अनुपालन न करने पर अनुबंध को तत्काल समाप्त करने और कानून के अनुसार आगे की कानूनी कार्यवाई का आधार होगा।/In terms of GeM GTC clause 26 regarding Restrictions on procurement from a bidder of a country which shares a land border with India, any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. While participating in bid, Bidder has to undertake compliance of this and any false declaration and non-compliance of this would be a ground for immediate termination of the contract and further legal action in accordance with the laws.

---धन्यवाद/Thank You---